A.N.A.R.T.S. News Bulletin 1398 for 28th of May 2006
ANARTS now has a web site at www.anarts.com.au
where information about the society can be found, as well
as
the weekly broadcast texts.
Views expressed in this news bulletin are not necessarily
those of the Broadcast Officer, the Relay Officers, or of
the Society.
Items in this broadcast include
1. Cols column
2. IPS REPORT
3. VK2SG RTTY DX report
4. Anarts Information
Col's Column

Propagation of Radio Waves.
The effect of the Ionosphere on the Sky Wave.
Continuing from last week,
If the frequency of the wave is increased while the angle
of incidence
remains constant, the depth of penetration into the layer
will increase.
The refractive index of sections of the layer increases
as the frequency
increases, and hence the degree of bending is reduced.
For example, it has been calculated that for an electron
density of
4 x 10 to the 5th electrons per CC, and a frequency of
6000 kHz, the
refractive index is 0.3. If the frequency is now
increased to 9000 kHz,
the refractive index increases to approximately 0.8. The
result is a much
smaller bending of the higher frequency.
A lower frequency wave, because of the low refractive
index, will
penetrate only slightly into the layer and will be
returned quickly to the
earth. As the frequency increases, the refractive index
becomes larger and
hence the wave penetrates further into the layer, taking
a much longer path
through the layer before turning earthwards. If the
frequency is increased
higher still, the wave passes through a lower layer and
enters the higher
layer, where because of the higher density of electrons,
it will be returned
back to earth. However, if the frequency is made so high
that the maximum
electron density of the higher layer is insufficient to
bend the wave back
to earth, and then the wave passes through both layers
and will not return
to earth unless there is another higher layer of still
greater electron density.
Waves of a given frequency are returned to earth more
readily by the
ionosphere when the angle of incidence is large. This is
to be expected
since the angle through which the wave path must be bent
becomes less as
the angle of incidence is increased.

When the angle of incidence is large, the penetration of the ionised layer
is very slight. However, as the angle of incidence decreases, the electron
density required to bend the wave becomes greater. With a further approach
to vertical incidence, the wave passes through the lower layer, and enters
the higher layer. Here the wave will be returned to earth from a point where
the electron density is high enough to bend the wave sufficiently, or,
will pass through to higher regions, where the angle of incidence is too
small for refraction to take place.
Next week we look at Critical Frequencies and the effect of the earths
magnetic field on Radio Waves. Again it is difficult to show formulas in
RTTY mode, so it will be in general terms only.
In the next week or two, I hope to be able to place some relevant figures,
and sketches on ANARTS Web site. I will keep you informed.
73's for this week Colin VK2CTD.
IPS Weekly Solar and Geophysical Report 19/25th May
SUMMARY
Date 19 20
21 22 23
24 25
10cm flux 75 76
78 83 84
84 84
AFr index 7 5
4 6 4
3 7 est
Aaus index 7 6
4 6 4
4 2 est
T index 33 15
16 22 24
28 23
Solar flare activity was very low all week.
Geomagnetic activity observed for the Australian Region was quiet on 21st
and 23/25th and quiet to unsettled on 19/20th and 22nd.
Southern Australian Ionospheric F2 critical frequencies were near
predicted on 19th and 21st near predicted to 20 percent enhanced on 20th
and 22nd near predicted to 15 percent enhanced on 23rd and near predicted
to 30 percent enhanced on 24/25th. Spread F was reported on 24/25th and
Sporadic E was reported on 25th.
Forecast for 26th May to 1st June
Solar activity should be low.
Geomagnetic activity should see quiet to unsettled conditions.
Frequencies should be near predicted monthly values to 30 percent
enhanced. Communications may be degraded during night hours due to

spread F.
courtesy of the IPS Radio and Space Services
summary by Pat VK2JPA ANARTS Broadcast Officer
VK2SG RTTY DX NOTES week ending 25 May
Our information this week came from AA5AU I5FLN DJ3IW and
the OH2AQ DX
Summit. Thank you all.
Bandpass
Friday 19
0320-14082 DQ2006S
0331-7045 DQ2006S
0332-14089 UN8PIM
0343-3580 DQ2006S
0632-14087 DR2006K
0723-14082 DR2006N
0756-14079 DQ2006C
0811-18107 DQ2006C
0825-10143 DQ2006C
0932-14088 DR2006G
1012-14081 DQ2006E
1022-14084 DQ2006Q
1040-14082 J5UTM
1044-14085 CU3NS
1050-14080 DR2006S
1205-14084 ER2NB
1327-14087 HS0ZBS
1351-14088 DR2006G
1358-14089 VK2KM
1408-10140 RW6BN
1422-18097 DR2006N
1436-18100 3B9FR
1449-14088 DQ2006E
1456-14084 DR2006N
1520-14083 DQ2006Q
1523-14087 JW0HZ
1526-14081 DQ2006Y
1531-18103 EA2AAZ
1543-10139 EU7SA
1555-14090 VR2XMT
1557-14089 DR2006G
1604-14083 BD7KLO
1630-14092 3B9FR
1655-14093 DQ2006C
1655-14086 DV1JM
1826-14081 DQ2006V
1827-14089 DR2006G
1900-3588 DQ2006V
1906-10141 CU2/DL2OE
1912-14083 OX3DB
1914-10145 C31BO
1933-10143 JA8NFV
1934-14086 DR2006S
1937-14083 DQ2006Y
1945-14093 SV9CVY
1946-10143 YU150AU
1954-10142 4L1FP
2008-10146 ER3MM
2027-7042 DR2006D
2032-10142 DR2006S
2036-14088 DQ2006X
2037-14081 CN8YZ
2045-10140 DR2006P
2046-14089 DQ2006X

2048-10142 DS2GOO/3
2115-14084 FM5AA
2115-14091 DQ2006Q
2116-10142 JH1EEB
2126-10143 DQ2006C
2151-14083 LU3OK
2209-14082 DQ2006C
2213-10147 JN3IWE
2234-14091 EA6/DF7XE
2337-3587 DQ2006R
Saturday 20
0146-7038 PZ5RA
0214-7038 4L4KK
0432-14088 DQ2006N
0440-14081 DQ2006S
0524-14089 HF13ZDL
0628-7038 DQ2006X
0628-7041 KH6ND/KH5
0635-7040 DQ2006S
0645-7036 DQ2006Y
0724-10141 KH6ND/KH5
0740-10144 AC7ZG
0753-14086 YM125ATA
0810-14083 BD7KLO
0812-10144 DS2GOO/3
0816-14091 DQ2006N
0835-14091 DQ2006Y
0838-14089 DQ2006X
0839-14090 DQ2006G
0850-14086 CU2/DL2OE
0908-14085 VQ9NL
0921-14088 UN7QX
0955-18107 VR2XMT
1037-14081 DR2006K
1037-14094 DQ2006R
1118-14086 EK6TA
1134-14088 EI6HB
1140-14088 EI6HB
1140-18103 DQ2006X
1143-18102 UA0AV
1222-14095 DQ2006R
1224-14081 DR2006K
1226-14091 DQ2006Y
1311-18102 DQ2006X
1342-18104 TR8CA
1343-10142 DQ2000X
1403-14086 TA1EE
1408-7038 DQ2006R
1415-14091 VR2XMT
1420-14082 BD7KLO
1458-18103 DQ2006X
1515-10142 RV9CPK
1600-7084 K3O
1645-14092 DQ2006N
1725-10142 4L1FP
1736-14083 DR2006N
1736-7045 VE2NSU
1737-18068 PP7JR
1812-14082 UN7EG
1820-3586 DR2006D
1847-18104 CU3AA
1847-21081 TU5JM
1927-14088 DQ2006Y

1928-14081 XX9BB
1928-14086 DQ2006N
1940-14084 OX3WS
2005-14081 EA6/DF7XE
2005-14086 CU2/DL2OE
2018-14086 CS60
2044-14084 ER3GS
2048-10141 RA9LR
2100-14082 KH6ND/KH5
2117-14084 CS6O
2124-14089 DQ2006N
2125-10143 FM5AA
2147-14094 DQ2006R
2152-14084 EA6/DF7XE
2154-14093 DQ2006R
2214-14083 OX3WS
2233-7032 DQ2006R
2237-1840 DR2006F
2240-14085 DS2GOO/3
2243-14089 VR2XMT
2306-3596 DR2006F
2333-7035 DR2006N
Sunday 21
0017-10141 SP3E
0020-3596 DR2006F
0049-18090 KH6ND/KH5
0238-10142 HK4SAN
0241-10142 VE9DX
0248-10142 TG9AKH
0251-1014 3DS2GOO/3
0336-7056 KH6ND/KH5
0443-14086 4K8F
0530-14083 VK2KM
0542-10143 DQ2006N
0559-10105 KH6ND/KH5
0653-21080 KH6ND/KH5
0711-21079 DR2006F
0740-21081 ZS2DL
0742-21079 DR2000F
0822-21079 SY05AIA
0827-14090 DR2006F
0831-14082 DQ2006X
0841-24925 KH6ND/KH5
0910-14086 EK6TA
0936-18099 KH6ND/KH5
0937-14086 DQ2006Y
0944-10141 DQ2006X
0948-28099 DR2006F
0949-7038D Q2006N
0953-14086 DQ2006M
0958-7037 DQ2006D
0959-7037 DQ2006Y
1020-18097 DQ2006Y
1028-18101 YU150AU
1028-18102 RA3CQ
1030-10142 HK4SAN
1045-14081 CS6O
1047-14087 DQ2006O
1052-14081 EI9EW
1055-14089 II2V
1111-14083 DS2GOO/3
1114-7034 DF8CS
1125-18101 EU7SA

1126-18104 OE6MDF
1150-10143 DR2006N
1202-14087 3B9FR
1209-18108 HK4QHD
1212-18103 4L4KK
1222-14080 DR2006G
1223-14093 DQ2006Y
1224-14086 BD7KLO
1241-14079 YT0TESLA
1248-18102 YB0COU
1250-7034 DQ2006A
1251-14082 VR2XMT
1301-7034 DQ2006A
1302-14080 DR2006G
1328-14096 DR2006D
1333-14084 HS0ZBS
1356-10138 OZ7AEI
1402-18107 VR2XMT
1407-18104 DQ2006Y
1410-18105 TR8CA
1427-14082 4L1DA
1431-18103 5X1GS
1431-14082 DV1JM
1438-18106 3B9FR
1506-7036 DQ2006Y
1509-14082 YB0JIV
1509-14087 OX3WS
1513-14088 UN8PIM
1543-14088 DQ2006R
1549-18104 CN8NK
1604-18100 CU2/DL2OE
1604-14093 SV9CVY
1611-14093 K0ARY/VP9
1616-7038 9A150NT
1616-14087 3B9FR
1624-14086 DQ2006Y
1713-21081 DR2006N
1723-7035 DR2006N
1741-10139 DQ2006X
1744-14085 SY05AIA
1800-7034 DR2006N
1851-3600 9A150NT
1930-14076 DQ2006T
1945-14084 XE3ISS
2025-10145 SV1JMO
2033-10143 G4KMH
2051-14090 DQ2006Y
2108-14092 EA6/DF7XE
2113-3598 DQ2006R
2125-14085 OX3DB
2200-18100 HC2NGF
2223-14083 DQ2006R
2307-14087 G5MS
Monday 22
0008-14089 SV9CVY
0028-10138 SP3E
0059-14087 HR2/LU1DY
0441-7060 KH6ND/KH5
0600-14083 LZ130B
0711-14086 DQ2006S
0854-14081 KH6ND/KH5
0913-14088 DQ2006Y
0950-14084 DQ2006Z

1129-14085 DR2006B
1138-14080 DQ2006R
1151-14083 LU3DJS
1230-14084 BD7KLO
1241-14083 DR2006D
1248-14083 DQ2006S
1253-14087 CU6NS
1307-14086 3A2LF
1328-14087 E20WXA
1330-14077 E21YDP
1350-18103 TR8CA
1357-18105 J5UAP
1358-18109 JF1PJK
1400-18105 TI8CBT
1430-14088 DQ2006W
1434-14092 VR2XMT
1522-24924 SV3DCX
1531-14086 UN8PIM
1542-14087 IS0YTA
1623-14089 DQ2006S
1700-14086 DR2006B
1710-10141 4L1FP
1715-7039 9A150NT
1727-14084 UN8PIM
1742-14089 OX3WS
1742-14093 DR2006D
1746-14084 DR2006K
1806-10139 SV3DCX
1818-14080 VQ9NL
1819-14080 CU2/DL2OE
1844-14088 DR2006N
1846-14086 CU6NS
1850-14075 DQ2006T
1907-14087 EA8RA
1909-10141 DQ2006Y
1912-7036 DQ2006S
1924-14080 TI8CBT
1944-14083 6W2SC
2018-3583 DR2006N
2019-14086 DR2006B
2021-3600 DQ2006T
2021-10141 DQ2006Y
2025-7036 DQ2006S
2026-7038 DQ2006Y
2028-14081 EX2M
2034-14082 CN8YZ
2059-14082 YM125ATA
2108-3584 EC1AAC
2112-14083 6W2SC
2112-14088 FM/F5OIU
2134-14089 OX3WS
2141-3600 DQ2006Z
2152-7076 MM0ALM
2156-3584 DQ2006R
2214-14079 SV9CVY
2218-10138 CU2/DL2OE
2259-14091 DQ2006T
2328-7040 6W2SC
Tuesday 23
0134-14080 XE1ZVO
0225-7036 YY1RDX
0621-10114 KH6ND/KH5
0632-14088 6K2DFG

0716-18101 UA3QDX
0813-14084 DQ2006Z
0813-18105 SP9CV
0824-14083 DR2006B
0913-14082 DQ2006S
1104-14084 E20WXA
1147-14087 G5MS
1215-18102 JW0HZ
1254-14083 BD7KLO
1301-14086 VR2XMT
1303-14080 GI4WXA
1419-14086 MU0FAL
1440-18105 J5UAP
1445-14081 9V1UV
1525-18101 TI8CBT
1528-14084 9A150NT
1548-18104 9A150NT
1602-18102 DQ2006Y
1704-3586 DQ2006M
1720-10139 SV3DCX
1752-14084 XU7ABN
1828-3593 DQ2006S
1833-7034 DQ2006M
1903-14091 DR2006D
1911-14097 DQ2006T
1923-14084 OX3DB
1933-3582 DQ2006I
1951-14084 CU2/DL2OE
2026-18106 DQ2006T
2040-14085 DQ2006Q
2050-10141 OM5DP
2101-14077 E21YDP
2139-18158 KP4BI
2139-14090 FM/F5OIU
2141-14086 S79RS
2233-14082 TF3PPN
2234-3584 DQ2006Y
2305-14083 KD4POJ
Wednesday 24
0342-14084 XE3ISS
0413-14082 LZ06KM
0743-14084 OX3WS
0804-14085 XW8DX
0900-14088 ZF/NU9N
0918-14084 KH6ND/KH5
0927-24895 DR2006N
1027-14088 LX1EA
1125-14084 DQ2006Q
1244-18101 HK4QHD
1311-14088 UN8LF
1314-14087 VR2XMT
1329-14089 DR2006H
1408-10140 DQ2006X
1426-18105 CT3AS
1429-14084 HS0ZBS
1444-14087 GI4WXA
1447-14085 TF3GC
1526-14081 4L4KK
1538-14084 TM2CV
1556-14084 DQ2006Y
1624-14083 KD4POJ
1832-14080 YU150RP
1843-14088 DQ2006N

1908-10145 S58P
1929-3586 DR2006Y
1949-24920 9A150NT
2002-24922 WP3C
2021-14082 BD7KLO
2023-3586 DQ2006Y
2027-14091 DQ2006C
2034-14082 LU4JHD
2035-10142 LY8O
2039-14085 XE3ISS
2046-10143 EA6/DF7XE
2049-24920 JW4GHA
2101-14083 DQ2006Q
2115-14081 CU2/DL2OE
2118-3591 DR2006B
2123-28080 JW4GHA
2125-3586 DQ2006R
2129-7038 DR2006B
2130-10138 DQ2006Y
2148-14082 YM125ATA
2207-24921 TG9GJG
2359-14085 HK6DOS
Thursday 25
0005-14087 HR2/LU1DY
0022-14086 KD4POJ
0110-14084 KJ7QM
0433-14082 VK2KM
0724-18102 DQ2006Y
0731-18106 JA1CLW
0826-28088 DQ2006S
0901-14088 LX1EA
0907-14088 TM2CV
0921-14080 DQ2006N
0932-14085 DR2006B
0935-24920 DQ2006Y
0935-14081 TF3AO
0941-14087 E20WXA
0942-7040 DQ2006S
0942-18103 JR7DXN
1100-7077 DQ2006D
1108-14082 UN8LF
1126-7040 DQ2006V
1128-21081 DR2006N
1145-14085 CN8YZ
1212-14086 DA0HAMCAMP
1224-7040 DQ2006V
1231-14083 DQ2006Z
1235-21083 DQ2006Y
1240-14086 DR2006N
1244-18109 HZ1IK
1245-28083 UN7PBY
1251-14086 FM5AA
1253-14082 DQ2006L
1253-14081 DR2006S
1254-14083 BD7KLO
1332-14092 VR2XMT
1346-7041 DR2006S
1351-18107 VR2XMT
1410-14084 S79RS
1436-10141 DR2006S
1440-14083 BD4WCK
1447-14089 TA1EE
1449-18106 DS5RYB

1450-14082 VR2KW
1459-14084 DQ2006Y
1515-14085 E20WXA
1520-14083 YB0JIV
1602-14084 HS0ZBS
1603-7041 DR2006B
1645-14082 IF9FI
1652-14091 OX3DB
1829-14080 ST0RM
1900-14083 DQ2006S
1909-14086 HF80LKK
1915-14085 OX3WS
Notes of interest :
All DQ2006 and DR2006 stations will automatically send QSL cards for all
contacts made. You do NOT need to send cards to them. There is activity
from 12 stadiums DR2006 and 26 'districts' DQ2006. For further info on
the calls and the awards available visit www.amateurradio2006.de
May 23/Jun 05 Look for S79RS by IZ8CLM holiday style operation. QSL via
bureau or to home call.
May 25/Jun 20 Look for VI9NI to be active from Norfolk Island. QSL via
bureau or to ODXG PO Box 612 Childers 4660 Australia
June 23/25 HAMRADIO at Friedrichshafen in Germany. For more info check
out
http://www.hamradio-friedrichshafen.de/html/en/index.php
There will be a RTTY dinner/gathering on the Friday evening at Restaurant
'Heuschober' from 1900UTC local time. Check out www.drcg.de for more info.
The VK2SG RTTY DX NOTES are distributed every week via the Winlink network
and are also available on the Internet at URL
http://mailman.qth.net/mailman/listinfo/vk2sg-rtty
For next weeks bulletin, send your bandpass and notes of interest to Luciano
I5FLN at luciano.fusari at alice.it
Phil Cooper GU0SUP
There is no OPDX bulletin this week – presumably the editor was having
a good time at Dayton.
The Society can be contacted in the following ways
To Pat VK2JPA via patleeper at optusnet.com.au or
Col VK2CTD via ctdavies at bigpond.net.au or
you can drop a line to PO Box 93 Toongabbie NSW 2146.
73’s for this week from Pat VK2JPA Broadcast Officer.
NNNN